

CLAIMS

1. A method for screening for a tumor suppressor gene or an oncogene, comprising comparing the degree of methylation of cytosine residues in a CpG island between genomic DNA derived from a human glioma or a human glioma cell line and that derived from a normal tissue.
2. The method for screening for a tumor suppressor gene or an oncogene of claim 1, wherein the tumor suppressor gene or the oncogene is the tumor suppressor gene or the oncogene in a human glioma.
3. The method for screening for a tumor suppressor gene or an oncogene of claim 2, wherein the tumor suppressor gene in the human glioma is the RFX1 gene or the BGT-1 gene.
4. The method for screening for a tumor suppressor gene or an oncogene of claim 3, wherein intron 7 of the RFX1 gene is used as the RFX1 gene.
5. The method for screening for a tumor suppressor gene or an oncogene of claim 2, wherein the oncogene in the human glioma is a HOX gene such as HOXD1, HOXD3, HOXD4, HOXD8, HOXD9, HOXD10, HOXD13, HOXA9, HOXB9, or HOXC9.
6. A method for diagnosing a cancer such as a human glioma, comprising measuring at least one of the degree of methylation, the presence or absence of gene mutation, the level of gene expression, and the level of protein expression of the tumor suppressor gene or the oncogene in the human glioma etc., obtained by the screening method of any one of claims 1 to 5.
7. A diagnostic agent for a cancer such as a human glioma, comprising an reagent that allows measurement of at least one of the degree of methylation, the presence or absence of gene

mutation, the level of gene expression, and the level of protein expression of the tumor suppressor gene or the oncogene in the human glioma, obtained by the screening method of any one of claims 1 to 5.

8. A therapeutic method for a cancer such as a human glioma, comprising either expressing in a cancer cell the tumor suppressor gene in a cancer such as a human glioma, obtained by the screening method of any one of claims 1 to 4, or administering to a cancer patient at least one of a gene product of said tumor suppressor gene, a methyltransferase inhibitor, and a histone deacetylase inhibitor.

9. A therapeutic agent for a cancer such as a human glioma, containing at least one of the tumor suppressor gene in the cancer such as a human glioma, obtained by the screening method of any one of claims 1 to 4, a gene product of said tumor suppressor gene, a methyltransferase inhibitor, and a histone deacetylase inhibitor.

10. A therapeutic method for a cancer such as a human glioma, comprising administering to a cancer patient an expression inhibitor of the oncogene in the cancer of a human glioma etc., obtained by the screening method of claims 1, 2, or 5, or a compound such as peptide and protein specifically binding to an expression inhibitor of the oncogene or gene product of the oncogene.

11. A therapeutic agent for a cancer such as a human glioma, containing an expression inhibitor of the oncogene in the cancer such as a human glioma, obtained by the screening method of claims 1, 2, or 5, or a compound such as a peptide and a protein specifically binding to an expression inhibitor for said oncogene.

12. A diagnostic or therapeutic method for a cancer such as a

human glioma, comprising targeting the tumor suppressor gene or the oncogene in the cancer such as a human glioma, obtained by the screening method of any one of claims 1 to 5.

13. A diagnostic or therapeutic method for a cancer such as a human glioma, comprising targeting the RFX1 gene or the HOX gene family.

14. A diagnostic or therapeutic agent for a cancer such as a human glioma, comprising targeting the tumor suppressor gene or the oncogene in cancers such as human glioma, obtained by the screening method of any one of claims 1 to 5.

15. A diagnosing or therapeutic agent for a cancer such as a human glioma, comprising targeting the RFX1 gene or the HOX gene family.

